

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in this application. Please amend the claims as follows:

Claims

We Claim:

1. (Currently Amended) A method for reducing hydrogen sulfide emissions from asphalt, comprising:

adding zinc oxide to asphalt in an amount effective to reduce hydrogen sulfide (H_2S) emissions, and

—wherein an amount of from greater than 0.05 0.1 wt % to less than 3.0 wt % of zinc oxide is added to the asphalt;

adding from 0.01 wt % to less than 0.05 wt % of a crosslinker to the asphalt; and
wherein the zinc oxide reduces hydrogen sulfide emissions.

2. (Cancelled).
3. (Original) The method of claim 1 where the hydrogen sulfide emission is reduced to about 50 ppm or lower.
4. (Previously Presented) The method of claim 1 where the zinc oxide is added in an amount ranging from 0.5 to 2 wt% based on the asphalt.
5. (Cancelled).
6. (Cancelled).
7. (Currently Amended) The method of claim 6-1 where-in adding the crosslinker, the crosslinker is further selected from the group consisting of elemental sulfur, mercaptobenzothiazole (MBT), thiurams, dithiocarbamates, mercaptobenzimidazole, and mixtures thereof.

8. (Cancelled).
9. (Previously Presented) The method of claim 1 further comprised of adding aggregate.
10. (Currently Amended) A method for preparing asphalt comprising:
heating asphalt;
~~adding a crosslinker to the mixture, where the crosslinker is selected from the group consisting of elemental sulfur, mercaptobenzothiazole (MBT), thiurams, dithiocarbamates, mercaptobenzimidazole, and mixtures thereof; and~~
reducing hydrogen sulfide (H_2S) emissions in the asphalt by adding- an amount of from ~~0.05 greater than 1.0~~ wt% to less than 3.0 wt% of said zinc oxide.
11. (Currently Amended) The method of claim 10 further comprised of adding a vinyl aromatic/conjugated diene elastomeric polymer ~~to said asphalt, where the zinc oxide is added in an amount greater than 0.15 wt% to less than 3.0 wt% and where the crosslinker is present in an amount ranging from about 0.01 to 0.6 wt%~~.
12. (Currently Amended) The method of claim 10 wherein zinc oxide that scavenges H_2S is added in an amount ranging from ~~0.5 to about 2 wt.% based on the asphalt composition.~~
13. (Cancelled).
14. (Cancelled).
15. (Original) The method of claim 10 where the hydrogen sulfide emission is reduced to about 50 ppm or lower.

16. (Previously Presented) The method of claim 10 further comprised of adding aggregate.
17. (Previously Presented) An asphalt prepared by the method of claim 10.
- 18.-21. (Cancelled).
22. (Previously Presented) A road made from the asphalt of claim 17 and aggregate.
23. (Previously Presented) A roof sealed with the asphalt of claim 17.
24. (Previously Presented) A method of sealing a roof with asphalt comprising heating the asphalt of claim 17 and distributing it over at least a portion of a roof surface.
25. (Currently Amended) A method of road building comprising combining the asphalt of claim 17 with aggregate to form a road paving material, and using the material to form road pavement.
26. (Cancelled).
27. (Currently Amended) A method of recycling asphalt comprising:
physically removing asphalt from a location;
~~and in any order~~ reducing the size of the removed asphalt;
~~, heating the removed asphalt;[.] and~~
adding zinc oxide to the asphalt in an amount effective to reduce hydrogen sulfide (H₂S) emissions, wherein an amount of from greater than 1 wt % 0.05 wt % to less than 3.0 wt % of zinc oxide is added to the asphalt.
28. (Previously Presented) Asphalt made by the method of claim 27.
29. (Cancelled).

30. (Previously Presented) The method of claim 1 where the hydrogen sulfide emission is reduced to about 10 ppm or lower.
31. (Previously Presented) The method of claim 1 further comprising the step of reducing H₂S emissions by adding the cross-linking agent at 280° F.
32. (Previously Presented) The method of claim 1 further comprising the step of reducing H₂S emissions by adding the cross-linking agent at a lowest temperature at which asphalt can be effectively pumped.
33. (Previously Presented) An asphalt made by the method of claim 1.
34. (Previously Presented) An asphalt made by the method of claim 11.
35. (Currently Amended) The method of claim 27 wherein the asphalt is polymer modified and wherein greater than 0.15 wt % to less than 3.0 wt % of zinc oxide is added and wherein the crosslinker is present in an amount ranging from about 0.01 to 0.6 wt%.
36. (New) The method of claim 10 further comprising the step of adding a crosslinker ranging from 0.01 to 0.6 wt% based on the weight of the asphalt.
37. (New) A method for reducing hydrogen sulfide emissions from a non-elastomeric base asphalt, comprising:
adding zinc oxide to a non-elastomeric base asphalt in an amount effective to reduce hydrogen sulfide (H₂S) emission;
wherein an amount of from greater than 0.1 wt % to less than 3.0 wt % of zinc oxide is added to the asphalt; and
wherein the zinc oxide reduces hydrogen sulfide emissions.

38. (New) The method of claim 37 further comprising the step of adding a crosslinker in an amount ranging from about 0.01 to 0.6 wt%, wherein the crosslinker is selected from the group consisting of elemental sulfur, mercaptobenzothiazole (MBT), thiurams, dithiocarbamates, mercaptobenzimidazole, and mixtures thereof.

39. (New) The method of claim 37 wherein the asphalt is comprised of recycled asphalt.